Title: **RACKET STRING CORRECTION TOOL**

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Cross Reference to Related Applications

[0001] This application claims priority to Argentina Utility Model Serial No. M 02 01 03238 filed on August 29, 2002.

Field of Invention

[0002] The present invention generally relates to a tool for adjusting racket strings. More particularly, the invention relates to a racket string correction tool configured to push a string transversally and a hook to pull it and correct displacements in the set of strings' octagonal configuration, and provide a cutting edge suitable for cutting the string.

Background of the Invention

[0003] In practice, the correct tension of a filamentous element (*e.g.*, string) passing in a zig-zag fashion through oval frame holes is considered very important to allow a player, when hitting a ball, to direct the ball at the desired speed. The shot effect and direction are achieved by the player's capacity, and also depend on the correct tensing of the strings and the configuration of the grid squares formed by the strings.

[0004] During a match, collisions between the ball and the racket strings often cause the displacement of some sections of the strings and alter the grate configuration, that acts as a tempered patch, and produces an unbalance that impairs shot quality. It is for this reason that we often see players making great efforts to correct such defects with their fingers.

[0005] Another difficulty that is typical of a racket sport is observed when there is a cut in a non-central point of the string, whose tension is maintained due to the friction adjustment against the frame threading holes and crossings; however, there is a tempering unbalance in

the cut section, that may bend the racket. Such bending is temporarily corrected by a compensating cut made at a certain point of the grate.

[0006] According to previous rules of the art, in order to solve the above-mentioned problems without stopping the match or replacing the racket, tennis players needed to have a lever at hand to correct the octagonal distortion referred to above, in the former case , as well as a pair of scissors or cutting element to solve the unbalancing referred to in the latter case. Obviously, the danger posed by such elements prevents tennis players from carrying them to the tennis court.

Summary of the Invention

[0007] This invention provides a tool capable of allowing for the immediate correction of racket string deformations and/or making the necessary cuts to balance partial tension losses.

[0008] In accordance with one embodiment of the invention, the tool includes a longitudinal instrument whose size may be compared with that of a pen, provided with a handle portion or hilt, with non-slipping grooves, that covers the largest portion of the tool and is axially interposed between an actuating point in a string transversal displacement portion and the cutting point.

[0009] In accordance with one aspect of the embodiment, the transversal section of the tool is gradually reduced from one end of the tool to the other, and the section finishes off, at the free end, with a substantially semi-circular point between two flat faces that, from the hilt, forms a decreasing wedge.

[0010] In accordance with a further aspect of the invention, an arc of the semicircular point presents a transversal notch with reference to the above-mentioned wedged faces, capable of assembling the string and a side appendage that incorporates a parallel opened hook, on the side opposite to the above-mentioned notch, that resembles a crochet needle.

[0011] At the opposite end, the hilt decreases and defines, axially, a half-ellipsoid with a V-shaped notch at its point, that houses the cutting edge of a blade, transversally oriented towards the opening, that is built-in in the tool and provides no external dangerous exposure.

[0012] Hence, when the grid square has been reduced, the player, holding the tool by the handle portion, will introduce the actuating point to expand it with the pushing force entering from the wedged structure, up to the depth necessary for the transversal pushing force to produce a satisfactory adjustment.

[0013] Whenever string displacement requires a harder sliding effort to overcome the intercrossing string forces, the tool axial pushing force will be exercised on the string wedged in the notch or else the string will be pulled and hooked by its lateral appendage.

[0014] When an accidental cut of a string causes a tension unbalancing, it may be solved by introducing the string in the cutting notch and pushing it axially until it is cut by the cutting edge.

Brief Description of the Drawings

[0015] A more complete understanding of the present invention may be derived by referring to the detailed description and claims, considered in connection with the figures, wherein like reference numbers refer to similar elements throughout the figures, and

[0016] Figure 1 is a view in perspective of a tool in accordance with one embodiment of the invention;

[0017] Figure 2 is a view showing operation of the tool illustrated in Figure 1 to calibrate string grid squares;

[0018] Figure 3 shows a view in perspective of the actuating point when pushing the string;

[0019] Figure 4 is a view showing the tensile force exercised on the string; and

[0020] Figure 5 shows a view in perspective of the cutting point balancing a string section.

[0021] Skilled artisans will appreciate that elements in the figures are illustrated for simplicity and clarity and have not necessarily been drawn to scale. For example, the dimensions of some of the elements in the figures may be exaggerated relative to other elements to help to improve understanding of embodiments of the present invention.

Detailed Description

[0022] In order to define the above-mentioned advantages and facilitate the understanding of the constructive and functional characteristics of the invented racket string correction tool, there follows a description of an example, that is briefly illustrated without a specified scale in the attached pages, expressly pointing out that, as it is a mere example, no restrictive character should be considered as the only intention of the description set forth herein to describe the basic conception on which the invention is based.

[0023] As it may be observed in **Figure 1**, a tool in accordance with one embodiment of the invention includes a handle portion or hilt -1- with an actuating point -2- and a cutting point -3-.

[0024] The hilt has the necessary thickness to be held by the player and it is provided with non-slipping grooves -4- ; its thickness decreases axially on a portion of hilt -1-. Actuating point -2- provides a wedge between two lateral faces -5-, that meet at a point -6- that ends in a substantially semi-circle shape, with an end notch -7- and incorporates a hook -8- on its side.

[0025] From the opposite side of the hilt -1-, there is an ellipsoidal structure that defines the cutting point -3-, that is provided with the V-shaped notch -9- at the end with a cutting blade -10- inside, oriented towards the outlet.

[0026] On account of the above said, the narrowed grid square may be corrected, as shown in **Figure 2**, by introducing the actuating point -2- with a gradual pushing effort to expand the wedge -5- to provide the proper gap between strings or a string and a frame.

[0027] When the string is so tight that the corrective displacement with reference to the perpendicular string to which it crosses cannot be made, the user -- as shown in **Figure 3** --, forces the string into the tool notch and applies a pushing force in the necessary direction to reach the correct position.

[0028] **Figure 4** shows a racket section where the axial pushing force is impaired by the frame -M-. In this case, the actuation point hook -2/8- is used to carry out the necessary correction while pulling from a comfortable position.

[0029] The strings shown in **Figure 5** have been accidentally cut at point -11- at an -a- distance from the central perpendicular string -12- thus unbalancing the section tension. In this case, balance may be recovered by a cut made at the point -13-, located at an -a'- distance from the center, by wedging the string in the notch -9- and pushing it until it is cut by the cutting edge of the blade -10-.

[0030] The racket string correcting tool that has been described and exemplified herein is included within the protection scope as determined, in the fundamental points, by the text of the following claims.